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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,714	11/25/2003	Robert J. Cashler	DP-310218	7498
22851	7590	02/17/2006	EXAMINER	
DELPHI TECHNOLOGIES, INC.			ARTHUR JEANGLAUD, GERTRUDE	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			3661	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,714

Applicant(s)

CASHLER, ROBERT J.

Examiner

Gertrude Arthur-Jeanglaude

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 9-10, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Breed (U.S. Patent No. 5,684,701).

As to claims 1, 16, Breed discloses an apparatus for protecting occupants of a vehicle, the apparatus comprising an object detector configured to be installed within the vehicle and to monitor a position of an object relative to the vehicle (See abstract); a processor (See abstract) in communication with the object detector and configured to be installed within the vehicle and to determine a likelihood of a collision between the vehicle and the object based upon data received from the object detector and a calculated future path of the vehicle (See col. 9, lines 53-66) (potential path of the vehicle and future collision avoidance are accounted for the future path of the vehicle); a deployment device in communication with the processor and configured to be installed within the vehicle and to deploy a reversible physical safety countermeasure (braking system; see col. 9, lines 42-52) before the collision occurs if the processor determines that the collision is likely (See abstract).

As to claim 7, Breed discloses the object detector includes a radar based device (See col. 4, lines 38-41).

As to claim 9, Breed discloses the physical countermeasure is configured to at least one apply a brake on the vehicle (See col. 9, lines 42-52).

As to claim 10, Breed discloses a vehicle movement detector in communication with the processor and configured to monitor movement of the vehicle, the processor being configured to determine a likelihood of a collision between the vehicle and the object based upon data received from the vehicle movement detector (See abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6 11-15,17-20, 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed (U.S. Patent No. 5,684,701) in view of Hu et al. (U.S. Patent No.6,883,631).

As to claim 2, 17 Breed discloses all but fails to specifically disclose that the processor is configured to determine a likelihood of a collision between the vehicle and the object occurring within less than 1 second after a present time. In an analogous art, Hu et al, disclose the processor is configured to determine a likelihood of a collision between the vehicle and the object occurring (wherein sufficient time is provided to

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deploy the external bag (deployment device) see col. 2, lines 7-16). Considered as the occurrence is within less than 1 second after a present time. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Breed with that of Hu by having the processor configured to determine the likelihood between the vehicle and the object occurring within less than 1 second after a present time in order to control the deployment device (inflatable confinements).

As to claim 11, Breed discloses a method of protecting occupants of vehicles comprising the steps of sensing (detecting) that a vehicle is likely to be involved in a collision and wherein the sensing including calculating a future path of the vehicle (See col. 9, lines 53-66) (potential path of the vehicle and future collision avoidance are accounted for the future path of the vehicle); and deploying (See abstract) a safety countermeasure (braking; see col. 9, lines 42-52) before the collision and in response to the sensing step. Breed fails to specifically disclose that the collision occurring within less than 1 second after a present time. In an analogous art, Hu et al, disclose the processor is configured to determine a likelihood of a collision between the vehicle and the object occurring (wherein sufficient time is provided to deploy the external bag (deployment device) see col. 2, lines 7-16). Considered as the occurrence is within less than 1 second after a present time. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Breed with that of Hu et al. by having the processor configured to determine the likelihood between the vehicle and the object occurring within less than 1 second after a present time in order to control the deployment device (inflatable confinements).

As to claim 3, 5-6, 19, 24, Breed discloses the deployment device is configured to deploy an irreversible physical safety countermeasure (See abstract) before the collision occurs; and deploy a reversible physical safety countermeasure (braking system; see col. 9, lines 42-52) before the collision occurs (See abstract). Breed fails to specifically disclose that the processor is likely to determine the collision is within a first time period after a present time. In an analogous art, Hu et al. disclose if the processor determines that the collision is likely within a first time period after a present time and if the processor determines that the collision is likely within a second time period after the present time (wherein sufficient time is provided to deploy the external bag (deployment device) see col. 2, lines 7-16). Considered as the occurrence is within a first time period after a present time and a second time period after a present time. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Breed with that of Hu et al. by having the processor configured to determine the likelihood between the vehicle and the object occurring within a time period in order to control the deployment device (inflatable confinements).

As to claim 4, Breed discloses an irreversible physical safety countermeasure is deployed as discussed wherein one would consider a speed of the vehicle to be above a threshold speed using the speed detector (See 9, lines 42-52).

As to claims 12-13, 18, 20, Breed discloses all but fails to specifically disclose the sensing includes monitoring a position of an object relative to the vehicle and sensing that the vehicle is likely to be involved in a collision with the object; and monitoring the movement of the vehicle. In an analogous art, Hu et al. disclose the sensing includes

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monitoring a position of an object relative to the vehicle and sensing that the vehicle is likely to be involved in a collision with the object; and monitoring the movement of the vehicle (See col. 12, lines 58-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Breed with that of Hu et al. by monitoring the position of an object relative to the vehicle in order to control the deployment device.

As to claim 14, Breed discloses the monitoring step includes at least one of vehicle speed (See col. 9, lines 42-52).

As to claim 15, Breed discloses the physical safety countermeasure is configured to at least one of change inflating an air bag (See abstract).

As to claims 21-23, 25-29, Breed discloses the plurality of location coordinates (See col. 4, lines 64-67) but fail to specifically disclose the decision rating is calculated as an average of the factors. In an analogous art, Hu et al. disclose the determining steps includes calculating a plurality of factors related to movements of at least one of the vehicle and an object; calculating a decision rating based upon the factors; and comparing the decision rating to a threshold value (See Fig. 20); also Hu et al. disclose the decision rating is calculated as an average of the factors (See col. 2, lines 1-45); and Hu discloses the factors include at least one of an offset from lane center missed distance (See col. 2, lines 7-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Breed with that of Hu et al. by calculating a decision rating and calculating a plurality of factors related to movements in order to controllably inflate the inflatable confinements.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breed (U.S. Patent No. 5,684,701) in view of Strumolo et al. (U.S. Patent No. 6,831,572).

As to claim 8, Breed discloses all but fails to specifically disclose the deployment device is configured to deploy the physical safety countermeasure before the collision occurs if the processor determines that a probability of the collision is greater than 99%. In an analogous art, Strumolo et al. disclose a deployment device (airbag deployment) wherein factors are used in determining the probability of a collision; therefore one would obviously consider deployment based on probability especially if it's greater than 99% (See col. 5, lines 51-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Hu et al. with that of Strumolo et al. by determining a probability of a collision in order to improve warning system for use in a vehicle.

Response to Arguments

Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bomya (U.S. Patent No. 6,777,927)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gertrude Arthur-Jeanglaude whose telephone number is

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(571) 272-6954. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GAJ



February 13, 2006


GERTRUDE A. JEANGLAUDE
PRIMARY EXAMINER